SHORT COMMUNICATIONS

The Australian cockroach Periplaneta australasiae (Fab.) (Blattodea: Blattidae) breeding in glasshouses in Cambridge.—The 'Australian cockroach' Periplaneta australasiae (Fab.) is a naturalised pest species which is able to form colonies in Britain under artificially warm conditions (Marshall & Haes, 1988). The species is frequently associated with glasshouses in Northern Europe, with known colonies at Glasnevin Botanical Gardens, Dublin, Ircland (Cotton, 1980) and Göttingen and Jena Botanical Gardens, Germany (Renker & Asshoff, 1999). Examination of the collections at the Natural History Museum supports this observation, providing records from The Royal Horticultural Society Gardens, Wisley, Surrey (13.xii.1975), the Orchid House, Isfield, Sussex (18.iii.1922, J. P. Matthewman) and Kew Gardens, Surrey (2 specimens labelled 'viii/1920' and 'Tropical Fern House, 6/vii/1957, AHG Alston'). Most other specimens in the BMNH British Isles Collection were imported with produce from abroad, although 4 specimens labelled 'RCS Outstation, Downe, Kent, J. E. Cooper xi-xii/1984' suggest a colony once existed there.

On 10.vi.1990, on visiting the tropical glasshouses of the Botanical Gardens of Cambridge University (BGCU) (VC29, TL45), I collected two dying adults of P. australasiae and was informed by the gardeners that the glasshouses had recently been sprayed with insecticide. They explained that the cockroach was extremely abundant, and was especially apparent at night running on the vegetation. When I returned the following month, the infestation was still present in spite of the spraying, and the species was causing considerable damage to pitcher plants Nepentlies spp. (Nepenthaceae). The nymphs were strongly attracted to these insectivorous plants, and the pitchers filled up with dead cockroaches that dried up the plant's fluid reservoir, allowing subsequently trapped nymphs to survive and damage the pitcher by eating their way out. The pitchers subsequently rotted or dried

I returned to BGCU on 14.xii.2001, but no pitcher plants were observed in the tropical house; possibly planting of Nepeutlies spp. has been discontinued because of the cockroach's depredations. However, two nymphs were observed feeding in the opened female cone of the cycad *Dioon edule* Lindl. (Cycadaceae). *P. australasiae* has apparently been present at the Botanical Gardens for at least 11 years. It has almost certainly spread to Cambridge with plants from other infested glasshouses.

Marshall & Haes (loc.cit.) indicate records of P. australasiae from 30 vice-counties of the British Isles, including modern (post–1960) records from nine vice-counties. However, some of these records apparently refer to casual specimens imported from the tropics with produce (e.g. see Fowles, 1986). Probably the number of actual breeding colonies in the UK is very small. Ragge (1965) gives a record for Cambridgeshire, but this vice-county was not indicated in Marshall & Haes (loc.cit.). The most recent atlas of British orthopteroids (Haes & Harding, 1997) omits naturalised species.

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The contrasting range expansion of two species of *Deraeocoris* (Hemiptera–Heteroptera: Miridae) in south-east England.—The plant-bug *Deraeocoris flavilinea* (A. Costa) is a recent addition to the British fauna which was first noticed in July 1996 (Miller, 2001). Like others of the genus it is a predatory feeder, but is usually associated with trees of the genus *Acer*. It is a large and distinctive bug which, therefore, would probably have been detected within a few years of arriving in the country—one might guess that it arrived about 1990. Subsequently it appears to have established itself and spread very rapidly, even explosively! Similarly, it was first recorded in The Netherlands in 1985 (Aukema, 1989) and is now well established there (B. Aukema *pers. com.*). The bug's history in Britain to date is as follows:

- The July 1996 site for *D. flavilinea* was Hackney Marsh (HM), in the Lee Valley in east London.
- In 1998 it was seen here again and at three other sites: Blackwall (7 km south of HM), where the River Lee joins the River Thames (Miller *op. cit.*); "many on several occasions" were found a few kilometres up the Thames at Deptford Creek (Jones, 1999); and thirdly it was found at Forty Hall, Enfield (12 km north of HM) (Hodge, 1999).
- In 1999, the authors visited Forty Hall and found the bug numerous there on a lone sycamore tree.
- In 2000 it was found at Woolwich Common (5 km east of the 1998 Blackwall site) (A.A. Allen *pers. com.*). In 2000, too, it had reached Bletchley in north Buckinghamshire (75 km northwest of HM), the authors found it here the same day as B.S. Nau found one in his garden at Toddington in Bedfordshire (45 km northwest of HM). A day or two later Peter Kirby found specimens at two sites in Luton, in the same county (Nau, 2001).
- In 2002 the authors visited Hounslow Heath (28 km southwest of HM) on 3 June. This is a Local Nature Reserve in west London, close to Heathrow Airport and is a site where there was a rich Heteroptera fauna in the mid-1950s (Woodroffe, 1953, 1954). The object of our visit was to see what changes had occurred in the interim. To our surprise we found that *D. flavilinea* was already both common and well distributed about the site. There were nymphs of the fourth and fifth instars on diverse species of shrub in a hedgerow bordering a grassy meadow and even on birch in the visitors' car park! Continuing the story of *D. flavilinea*, in mid-July 2002 the authors found it both widespread and numerous on diverse species of shrub and tree in hedgerows around Toddington in Bedfordshire and bordering a green lane at Swanbourne in Buckinghamshire (65 km northwest of HM). Clearly *D. flavilinea* is flourishing!